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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/478,884

01/07/2000

KAZUYUKI KURODA

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05/18/2004

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EXAMINER

SIMONE, CATHERINE A

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/478,884	Applicant(s) KURODA ET AL.	
	Examiner Catherine Simone	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 5, 9, 11-14, 19-48, 50, 53, 54 and 61-63 is/are pending in the application.
- 4a) Of the above claim(s) 24-47, 53 and 54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 9, 11-14, 19-23, 48, 50 and 61-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/18/04 has been entered.

Withdrawn Rejections

2. The 35 U.S.C. 112 rejections of claims 4 and 5 of record in Paper mailed 12/16/03, Page 2-3, Paragraph #5 have been withdrawn due to the Applicant's amendment in Paper filed 2/18/04.

Specification

3. The amendment filed 2/18/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The recitations "extend along a boundary surface between the first portion and the second portion" and "extend along a boundary surface between the portion and the substrate" are deemed new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 2, 4, 5, 9, 11-14, 19-23, 48, 50 and 61-63 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitations "extend along a boundary surface between the first portion and the second portion" in claim 1 and "extend along a boundary surface between the portion and the substrate" in claim 63 are deemed new matter. The specification, as originally filed, does not provide support for the invention as is now claimed.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 2, 4, 5, 9, 11-14, 19-23, 48, 50 and 61-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation "extend along a boundary surface" in claims 1 and 63 is deemed vague and indefinite. It is not clear what is meant by a boundary surface. What is a boundary surface? Clarification is requested.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

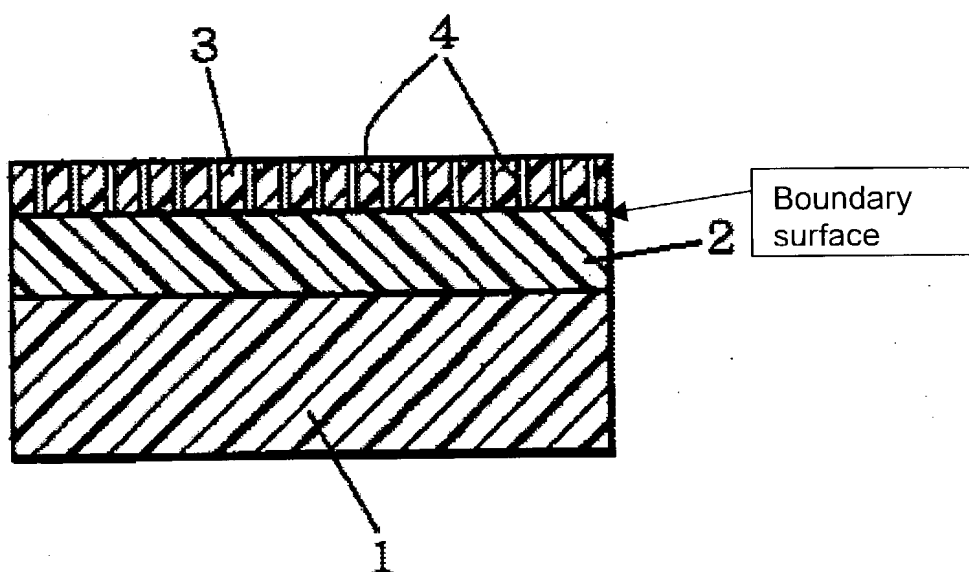
9. **Claims 1, 4, 5, 9, 11-14, 20, 21, 22, 48, 50, and 61-63** are rejected under 35 U.S.C. 102(e) as being anticipated by Hamada et al. (6,177,181).

Regarding **claim 1**, Hamada et al. discloses a structure comprising a first portion containing a polymer (Fig. 1, #2) and a second portion formed on the first portion (Fig. 1, #3), wherein the second portion has tubular pores (Fig. 1, #4), and the tubular pores are aligned uniaxially and extend along a boundary surface between the first portion and the second portion (see Figure 1 shown below). Regarding **claim 4**, note the polymer (Fig. 1, #2) is aligned in a direction, which is different from an alignment direction of the tubular pores (Fig. 1, #4). Regarding **claim 5**, note the polymer (Fig. 1, #2) alignment direction and the tubular pores (Fig. 1, #4) alignment direction are substantially orthogonal to each other. Regarding **claim 9**, note the

first portion contains polyester (see col. 12, line 41). Regarding **claim 11**, note a substrate (Fig. 1, #1) on which the first portion is formed. Regarding **claim 12**, note the substrate is glass (see col. 10, lines 44-45). Regarding **claims 13** and **14**, note a surfactant is held in the tubular pores (see col. 16, lines 43-45). Regarding **claim 20**, note the first portion comprises polyester (see col. 12, line 41). Regarding **claim 21**, note the polymer is polyimide (see col. 5, line 15). Regarding **claim 22**, note the pores are hollow (Fig. 1, #4). Regarding **claim 48**, note the tubular pores (Fig. 1, #4) are parallel to the substrate (Fig. 1, #1). Regarding **claim 50**, note axes of the tubular pores (Fig. 1, #4) are oriented in a direction parallel to a surface of the substrate (Fig. 1, #1). Regarding **claim 61**, note the second portion (Fig. 1, #3) has one end at one side and another end at another side and the tubular pores (Fig. 1, #4) extend through from the one end to the another end. Regarding **claim 62**, note the tubular pores are mesopores (see col. 16, lines 49-52).

Regarding **claim 63**, Hamada et al. discloses a structure comprising a substrate (Fig. 1, #1); a portion formed on the substrate, wherein the portion (Fig. 1, #3) has tubular pores (Fig. 1, #4), and the tubular pores (Fig. 1, #4) are aligned uniaxially and extend along a boundary surface between the portion and the substrate (see Figure 1 shown below).

FIG. 1



Allowable Subject Matter

10. Claims 2, 19 and 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first and second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments filed 2/18/04 have been fully considered but they are not persuasive. Applicant's argue that "the pores in Hamada are shown to be almost vertical to the

boundary region, and there is no disclosure or suggestion regarding pore orientation control (see, e.g., Fig 1). At most, Hamada states that "the configuration of the pores formed among particles [is] generally indefinite or amorphous, irregular and non-circular or non-spherical" (col. 4, lines 9-11). There is no disclosure or suggestion that the pores extend along the boundary surface between a portion containing the pores and the substrate." However, as pointed out in the 102 rejection shown above Hamada clearly teaches tubular pores extending along a boundary surface between a portion containing the pores and the substrate. Therefore, the claims fail to patentably define over the Hamada reference.

Conclusion

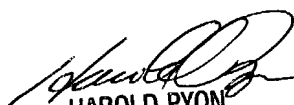
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Catherine Simone
Examiner
Art Unit 1772
May 14, 2004



HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

5/14/04